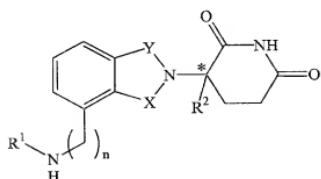


What is claimed is:

1. A compound of the formula:

5

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or a pharmaceutically acceptable salt, hydrate, solvate, clathrate, enantiomer, diastereomer, racemate, or mixture of stereoisomers thereof, wherein:

15

one of X and Y is C=O and the other is CH₂ or C=O;

R¹ is H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, C(O)R³, C(S)R³, 20 C(O)OR⁴, (C₁–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, C(O)NHR³, C(S)NHR³, C(O)NR³R³, C(S)NR³R³ or (C₁–C₈)alkyl–O(CO)R⁵;

R² is H, F, benzyl, (C₁–C₈)alkyl, (C₂–C₈)alkenyl, or (C₂–C₈)alkynyl;

25 R³ and R⁷ are independently (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R⁵, or C(O)OR⁵;

30 R⁴ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, (C₁–C₄)alkyl–OR⁵, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, or (C₀–C₄)alkyl–(C₂–C₅)heteroaryl;

R⁵ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, or (C₂–C₅)heteroaryl;

35

each occurrence of R⁶ is independently H, (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₂–C₈)heteroaryl, or (C₀–C₈)alkyl–C(O)O–R⁵ or the R⁶ groups can join to form a heterocycloalkyl group;

5 n is 0 or 1; and the * represents a chiral-carbon center; with the proviso that when n is 0 then R¹ is not H.

2. The compound of claim 1, wherein the compound is the R-enantiomer or substantially R.

10

3. The compound of claim 1, wherein the compound is the S-enantiomer or substantially S.

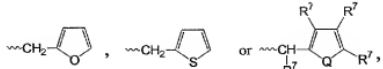
15 4. The compound of claim 1, wherein the compound is a racemic mixture.

5. The compound of claim 1, wherein the enantiomeric excess is about 90% ee or more.

20 6. A compound of claim 1, wherein R² is H or (C₁–C₄)alkyl.

7. A compound of claim 1, wherein R¹ is H, (C₁–C₄)alkyl, CH₂OCH₃, CH₂CH₂OCH₃, or

25



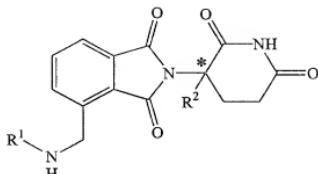
wherein Q is O or S, and each occurrence of R⁷ is independently H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, halogen, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R⁵, or C(O)OR⁵, or adjacent occurrences of R⁷ can be taken together to form a bicyclic alkyl or aryl ring.

35 8. A compound of claim 1, wherein R¹ is C(O)R³.

9. A compound of claim 1, wherein R¹ is C(O)OR⁴.

5

10. The compound of claim 1 having the formula:



10

15 or a pharmaceutically acceptable salt, hydrate, solvate, clathrate, enantiomer, diastereomer, racemate, or mixture of stereoisomers thereof, wherein:

R¹ is H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, C(O)R³, C(S)R³, C(O)OR⁴, (C₁–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, C(O)NHR³, C(S)NHR³, C(O)NR³R³, C(S)NR³R³ or (C₁–C₈)alkyl–O(CO)R⁵;

R² is H or (C₁–C₈)alkyl;

25 R³ and R³ are independently (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R⁵, or C(O)OR⁵;

30 R⁴ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, (C₁–C₄)alkyl–OR⁵, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, or (C₀–C₄)alkyl–(C₂–C₅)heteroaryl;

R⁵ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, or (C₂–C₅)heteroaryl;

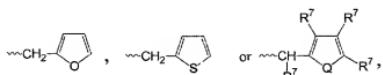
35

each occurrence of R⁶ is independently H, (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₂–C₈)heteroaryl, or (C₀–C₈)alkyl–C(O)O–R⁵ or the R⁶ groups can join to form a heterocycloalkyl group; and

5 the * represents a chiral-carbon center.

11. A compound of claim 10, wherein R¹ is H, (C₁–C₄)alkyl, CH₂OCH₃, CH₂CH₂OCH₃, or

10



15 wherein Q is O or S, and each occurrence of R⁷ is independently H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, halogen, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R⁵, or C(O)OR⁵, or adjacent occurrences of R⁷ can be taken together to form a bicyclic alkyl or aryl ring.

20

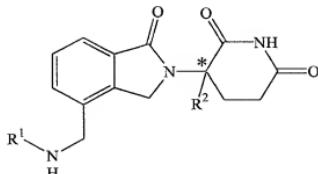
12. A compound of claim 10, wherein R¹ is C(O)R³.

13. A compound of claim 10, wherein R¹ is C(O)OR⁴.

14. The compound of claim 1 having the formula:

25

30



or a pharmaceutically acceptable salt, hydrate, solvate, clathrate, enantiomer, diastereomer, racemate, or mixture of stereoisomers thereof, wherein:

35

R¹ is H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, C(O)R³, C(S)R³, C(O)OR⁴, (C₁–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, C(O)NHR³, C(S)NHR³, C(O)NR³R³, C(S)NR³R³ or (C₁–C₈)alkyl–O(CO)R⁵;

5

R² is H or (C₁–C₈)alkyl;

R³ and R³ are independently (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl,

10 (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R³, or C(O)OR⁵;

R⁴ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, (C₁–C₄)alkyl–OR⁵, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, or (C₀–C₄)alkyl–(C₂–C₅)heteroaryl;

15

R⁵ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, or (C₂–C₅)heteroaryl;

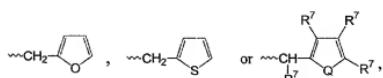
each occurrence of R⁶ is independently H, (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₂–C₅)heteroaryl, or (C₀–C₈)alkyl–C(O)O–R⁵ or the R⁶ groups can join to

20 form a heterocycloalkyl group; and

the * represents a chiral-carbon center.

15. A compound of claim 14, wherein R¹ is H, (C₁–C₄)alkyl, CH₂OCH₃,

25 CH₂CH₂OCH₃, or

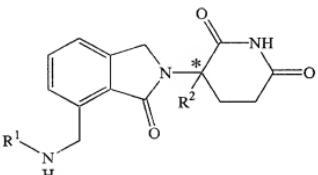


30 wherein Q is O or S, and each occurrence of R⁷ is independently H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, halogen, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R⁵, or C(O)OR⁵, or adjacent occurrences of R⁷ can be taken together to form a bicyclic alkyl or aryl ring.

16. A compound of claim 14, wherein R^1 is $C(O)R^3$.

17. A compound of claim 14, wherein R^1 is $C(O)OR^4$.

5 18. A compound of claim 1 having the formula:



or a pharmaceutically acceptable salt, hydrate, solvate, clathrate, enantiomer, diastereomer, racemate, or mixture of stereoisomers thereof, wherein:

20 R^1 is H, (C_1-C_8) alkyl, (C_3-C_7) cycloalkyl, (C_2-C_8) alkenyl, (C_2-C_8) alkynyl, benzyl, aryl, (C_0-C_4) alkyl- (C_1-C_6) heterocycloalkyl, (C_0-C_4) alkyl- (C_2-C_5) heteroaryl, $C(O)R^3$, $C(S)R^3$, $C(O)OR^4$, (C_1-C_8) alkyl- $N(R^6)_2$, (C_1-C_8) alkyl- OR^5 , (C_1-C_8) alkyl- $C(O)OR^5$, $C(O)NHR^3$, $C(S)NHR^3$, $C(O)NR^3R^3$, $C(S)NR^3R^3$ or (C_1-C_8) alkyl- $O(CO)R^5$;

R^2 is H or (C_1-C_8) alkyl;

25 R^3 and R^3 are independently (C_1-C_8) alkyl, (C_3-C_7) cycloalkyl, (C_2-C_8) alkenyl, (C_2-C_8) alkynyl, benzyl, aryl, (C_0-C_4) alkyl- (C_1-C_6) heterocycloalkyl, (C_0-C_4) alkyl- (C_2-C_5) heteroaryl, (C_0-C_8) alkyl- $N(R^6)_2$, (C_1-C_8) alkyl- OR^5 , (C_1-C_8) alkyl- $C(O)OR^5$, (C_1-C_8) alkyl- $O(CO)R^5$, or $C(O)OR^5$;

30 R^4 is (C_1-C_8) alkyl, (C_2-C_8) alkenyl, (C_2-C_8) alkynyl, (C_1-C_4) alkyl- OR^5 , benzyl, aryl, (C_0-C_4) alkyl- (C_1-C_6) heterocycloalkyl, or (C_0-C_4) alkyl- (C_2-C_5) heteroaryl;

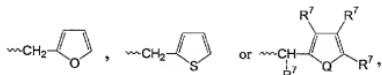
R^5 is (C_1-C_8) alkyl, (C_2-C_8) alkenyl, (C_2-C_8) alkynyl, benzyl, aryl, or (C_2-C_5) heteroaryl;

35 each occurrence of R^6 is independently H, (C_1-C_8) alkyl, (C_2-C_8) alkenyl, (C_2-C_8) alkynyl, benzyl, aryl, (C_2-C_5) heteroaryl, or (C_0-C_8) alkyl- $C(O)O-R^5$ or the R^6 groups can join to form a heterocycloalkyl group; and

the * represents a chiral-carbon center.

19. A compound of claim 18, wherein R¹ is H, (C₁–C₄)alkyl, CH₂OCH₃, CH₂CH₂OCH₃ or

5



10 wherein Q is O or S, and each occurrence of R⁷ is independently H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, halogen, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R⁵, or C(O)OR⁵, or adjacent occurrences of R⁷ can be taken together to form a bicyclic alkyl or aryl 15 ring.

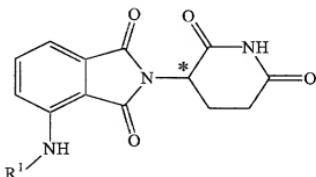
20. A compound of claim 18, wherein R¹ is C(O)R³.

21. A compound of claim 18, wherein R¹ is C(O)OR⁴.

20

22. A compound of claim 1 having the formula:

25



30 or a pharmaceutically acceptable salt, hydrate, solvate, clathrate, enantiomer, diastereomer, racemate, or mixture of stereoisomers thereof, wherein:

R¹ is H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, C(O)R³, C(S)R³, C(O)OR⁴, (C₁–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, C(O)NHR³, C(S)NHR³, C(O)NR³R³, C(S)NR³R³ or (C₁–C₈)alkyl–O(CO)R⁵;

R³ and R³ are independently (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵,

5 (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R⁵, or C(O)OR⁵;

R⁴ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, (C₁–C₄)alkyl–OR⁵, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, or (C₀–C₄)alkyl–(C₂–C₅)heteroaryl;

10 R⁵ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, or (C₂–C₅)heteroaryl;

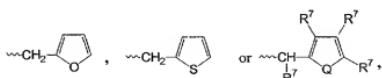
each occurrence of R⁶ is independently H, (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₂–C₅)heteroaryl, or (C₀–C₈)alkyl–C(O)O–R⁵ or the R⁶ groups can join to form a heterocycloalkyl group; and

15

the * represents a chiral-carbon center.

23. A compound of claim 22, wherein R¹ is (C₁–C₈)alkyl, benzyl, CH₂OCH₃, CH₂CH₂OCH₃, or

20



25

wherein Q is O or S, and each occurrence of R⁷ is independently H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, halogen, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R⁵, or C(O)OR⁵, or adjacent occurrences of R⁷ can be taken together to form a bicyclic alkyl or aryl ring.

30

24. A compound of claim 22, wherein R¹ is C(O)R³.

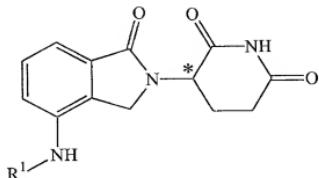
25. A compound of claim 24, wherein R³ is (C₀–C₄)alkyl–(C₂–C₅)heteroaryl,

35 (C₁–C₈)alkyl, aryl, or (C₀–C₄)alkyl–OR⁵.

26. A compound of claim 25, wherein heteroaryl is pyridyl, furyl, or thienyl.

27. A compound of claim 22, wherein R¹ is C(O)OR⁴.

5 28. A compound of claim 1 having the formula:



10

15 or a pharmaceutically acceptable salt, hydrate, solvate, clathrate, enantiomer, diastereomer, racemate, or mixture of stereoisomers thereof, wherein:

20 R¹ is H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, C(O)R³, C(S)R³, C(O)OR⁴, (C₁–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, C(O)NHR³, C(S)NHR³, C(O)NR³R³, C(S)NR³R³ or (C₁–C₈)alkyl–O(CO)R⁵;

25 R³ and R³ are independently (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, or C(O)OR⁵;

30 R⁴ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, (C₁–C₄)alkyl–OR⁵, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, or (C₀–C₄)alkyl–(C₂–C₅)heteroaryl;

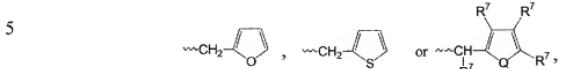
35 R⁵ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, or (C₂–C₅)heteroaryl;

each occurrence of R⁶ is independently H, (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₂–C₅)heteroaryl, or (C₀–C₈)alkyl–C(O)O–R⁵ or the R⁶ groups can join to form a heterocycloalkyl group; and

35

the * represents a chiral-carbon center.

29. A compound of claim 28, wherein R¹ is (C₁–C₈)alkyl, benzyl, CH₂OCH₃, CH₂CH₂OCH₃, or



(C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, halogen,
10 (C₀–C₄)alkyl–(C₁–C₈)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl,
(C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R⁵, or
C(O)OR⁵, or adjacent occurrences of R⁷ can be taken together to form a bicyclic alkyl or aryl
ring.

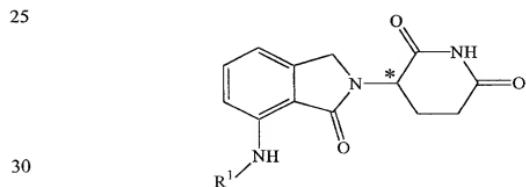
15 30. A compound of claim 28, wherein R¹ is C(O)R³.

31. A compound of claim 30, wherein R³ is (C₀–C₄)alkyl–(C₂–C₅)heteroaryl,
(C₁–C₈)alkyl, aryl, or (C₀–C₄)alkyl–OR⁵.

20 32. A compound of claim 31, wherein heteroaryl is pyridyl, furyl, or thiienyl.

33. A compound of claim 28, wherein R¹ is C(O)OR⁴.

34. A compound of claim 1 having the formula:



or a pharmaceutically acceptable salt, hydrate, solvate, clathrate, enantiomer, diastereomer, racemate, or mixture of stereoisomers thereof, wherein:

35

R¹ is H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, C(O)R³, C(S)R³, C(O)OR⁴, (C₁–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, C(O)NHR³, C(S)NHR³, C(O)NR³R³, C(S)NR³R³ or (C₁–C₈)alkyl–O(CO)R⁵;

5

R³ and R⁵ are independently (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R⁵, or C(O)OR⁵;

10

R⁴ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, (C₁–C₄)alkyl–OR⁵, benzyl, aryl, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, or (C₀–C₄)alkyl–(C₂–C₅)heteroaryl;

15

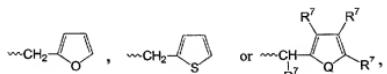
R⁵ is (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, or (C₂–C₅)heteroaryl;

each occurrence of R⁶ is independently H, (C₁–C₈)alkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, (C₂–C₅)heteroaryl, or (C₀–C₈)alkyl–C(O)O–R⁵ or the R⁶ groups can join to form a heterocycloalkyl group; and

20 the * represents a chiral-carbon center.

35. A compound of claim 34, wherein R¹ is (C₁–C₈)alkyl, benzyl, CH₂OCH₃, CH₂CH₂OCH₃, or

25



wherein Q is O or S, and each occurrence of R⁷ is independently H, (C₁–C₈)alkyl, (C₃–C₇)cycloalkyl, (C₂–C₈)alkenyl, (C₂–C₈)alkynyl, benzyl, aryl, halogen, (C₀–C₄)alkyl–(C₁–C₆)heterocycloalkyl, (C₀–C₄)alkyl–(C₂–C₅)heteroaryl, (C₀–C₈)alkyl–N(R⁶)₂, (C₁–C₈)alkyl–OR⁵, (C₁–C₈)alkyl–C(O)OR⁵, (C₁–C₈)alkyl–O(CO)R⁵, or C(O)OR⁵, or adjacent occurrences of R⁷ can be taken together to form a bicyclic alkyl or aryl ring.

35

36. A compound of claim 34, wherein R¹ is C(O)R³.

37. A compound of claim 36, wherein R³ is (C₀—C₄)alkyl—(C₂—C₅)heteroaryl, (C₁—C₈)alkyl, aryl, or (C₀—C₄)alkyl—OR⁵.

38. A compound of claim 37, wherein heteroaryl is pyridyl, furyl, or thienyl.

39. A compound of claim 34, wherein R¹ is C(O)OR⁴.

40. A compound of claim 1 having the formula:

I-1 (2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1*H*-isoindol-4-ylmethyl)-carbamic acid *tert*-butyl ester;

I-2 4-(aminomethyl)-2-(2,6-dioxo(3-piperidyl))-isoindoline-1,3-dione;

I-3 *N*-(2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1*H*-isoindol-4-ylmethyl)-acetamide;

I-4 *N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl)methyl} cyclopropyl-carboxamide;

I-5 (2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1*H*-isoindol-4-ylmethyl)-carbamic acid ethyl ester;

I-6 2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1*H*-isoindol-4-ylmethyl)-carbamic acid benzyl ester;

I-7 2-chloro-*N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl)methyl}acetamide;

I-8 2-(dimethylamino)-*N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl)methyl}-acetamide;

I-9 1-*tert*-butyl-3-(2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1*H*-isoindol-4-ylmethyl)-urea;

I-10 *N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl)methyl}-3,3-dimethylbutanamide;

1 I-11 *N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)-3-pyridylcarboxamide;

5 I-12 3-{1-oxo-4-(benzylamino)isoindolin-2-yl}piperidine-2,6-dione;

10 I-13 2-(2,6-dioxo(3-piperidyl))-4-(benzylamino)isoindoline-1,3-dione;

15 I-14 *N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl}propanamide;

20 I-15 *N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl}-3-pyridylcarboxamide;

25 I-16 *N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl}heptanamide;

30 I-17 *N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl}-2-furylcarboxamide;

35 I-18 2-azido-*N*-(2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1*H*-isoindol-4-yl-methyl)-acetamide;

I-19 2-amino-*N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl}acetamide;

I-20 ethyl 6-(*N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl}carbamoyl)hexanoate;

I-21 3-((*tert*-butoxy)carbonylamino)-*N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl}propanamide;

I-22 3-amino-*N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl}propanamide;

I-23 *N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl}-2-thienylcarboxamide;

1 I-24 *N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl}-2-methoxyacetamide;

5 I-25 (*N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl} carbamoyl)methyl acetate;

10 I-26 ethyl 2-((*N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl} carbamoyl) amino)acetate;

15 I-27 *N*-{(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)methyl} (ethylamino)carboxamide;

20 I-28 2-(2,6-Dioxo(3-piperidyl))-4-[(2-furylmethyl)amino]isoindoline-1,3-dione

25 I-29 *N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)-2-methoxyacetamide;

30 I-30 *N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)heptanamide;

35 I-31 {*N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)carbamoyl} methyl acetate;

I-32 *N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)pentanamide;

I-33 *N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)-2-thienylcarboxamide;

I-34 methyl {*N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)carbamoyl} formate;

I-35 *N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)-2-furylcarboxamide;

I-36 *N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)benzamide;

I-37 *N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl)propanamide;

I-38 methyl 3-*{N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl)carbamoyl}propanoate;

I-39 *N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl)-2-phenylacetamide;

I-40 *N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl)-2-pyridylcarboxamide;

I-41 *N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl)-2-chloroacetamide;

I-42 2-azido-*N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl)acetamide;

I-43 2-amino-*N*-(2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl)acetamide;

I-44 *N*-(2-(2,6-dioxo(3-piperidyl))-1-oxoisooindolin-4-yl)-2-chloroacetamide;

I-45 2-azido-*N*-(2-(2,6-dioxo(3-piperidyl))-1-oxoisooindolin-4-yl)acetamide;

I-46 2-amino-*N*-(2-(2,6-dioxo(3-piperidyl))-1-oxoisooindolin-4-yl)acetamide;

I-47 3-*{*4-((2-furylmethyl)amino)-1-oxoisooindolin-2-yl}piperidine-2,6-dione; or

I-48 3-(1-oxo-4-(pentylamino)isoindolin-2-yl)piperidine-2,6-dione;

I-49 2-(2,6-dioxo-piperidin-3-yl)-4-(2-methoxy-ethylamino)-isoindole-1,3-dione;

I-50 2-benzyloxy-*N*-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-acetamide;

I-51 2-(2,6-dioxo-piperidin-3-yl)-4-pentylamino-isoindole-1,3-dione;

I-52 3-chloro-*N*-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-benzamide;

I-53 *N*-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-2-phenoxy-acetamide;

15 I-54 4-(2-benzyloxy-ethylamino)-2-(2,6-dioxo-piperidin-3-yl)-isoindole-1,3-dione;

20 I-55 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-3-fluoro-benzamide;

25 I-56 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-3-methyl-benzamide;

30 I-57 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-3-methoxy-benzamide;

35 I-58 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-3-trifluoromethyl-benzamide;

40 I-59 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-3-nitro-benzamide;

45 I-60 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-butyramide;

50 I-61 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-2-methylamino-acetamide;

55 I-62 2-(2,6-dioxo-piperidin-3-yl)-4-heptylamino-isoindole-1,3-dione;

60 I-63 4-chloro-N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-benzamide;

65 I-64 cyclopropanecarboxylic acid [2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-amide;

70 I-65 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-4-fluoro-benzamide;

5 I-66 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-4-trifluoromethyl-benzamide;

10 I-67 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-4-methyl-benzamide;

15 I-68 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-4-nitro-benzamide;

20 I-69 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-2-ethoxy-acetamide;

25 I-70 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-2-methylsulfanyl-acetamide;

30 I-71 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-2-methoxy-benzamide;

I-72 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-2-fluoro-benzamide;

I-73 7-amino-N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]methyl}heptanamide;

I-74 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]methyl}butanamide;

I-75 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]methyl}benzamide;

I-76 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]methyl}phenylacetamide;

I-77 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]methyl}-2-pyridylcarboxamide;

I-78 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]methyl}undecamide;

1 I-79 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]methyl}-2-
5 methylpropanamide;

10 I-80 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]
methyl}cyclopentylcarboxamide;

15 I-81 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]
methyl}cyclohexylcarboxamide;

20 I-82 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]
methyl}(phenylamino)carboxamide;

25 I-83 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]
methyl}(butylamino)carboxamide;

30 I-84 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]
methyl}(propylamino)carboxamide;

35 I-85 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]
methyl}(cyclohexylamino)carboxamide ;

I-86 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]
methyl}[(methyl ethylamino)]carboxamide;

I-87 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]
methyl}(octylamino)carboxamide;

I-88 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]
methyl}(benzylamino)carboxamide;

I-89 N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisooindolin-4-yl]
methyl}(cyclopropylamino)carboxamide;

I-90 2-chloro-N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-
35 1H-isoindol-4-yl]-benzamide;

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I-91 [2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-carbamic acid benzyl ester;

I-92 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-acetamide;

I-93 Pentanoic acid [2-(2,6-dioxo-piperidin-3-yl)-1-oxo-2,3-dihydro-1H-isoindol-4-yl]-amide;

I-94 N-[2-(2,6-dioxo-piperidin-3-yl)-1-oxo-2,3-dihydro-1H-isoindol-4-yl]-propionamide;

I-95 N-[2-(2,6-dioxo-piperidin-3-yl)-1-oxo-2,3-dihydro-1H-isoindol-4-yl]-nicotinamide;

I-96 2-(2,6-dioxo-piperidin-3-yl)-4- {[(furan-2-ylmethyl)-amino]-methyl}-isoindole-1,3-dione;

I-97 N-[2-(2,6-dioxo-piperidin-3-yl)-1-oxo-2,3-dihydro-1H-isoindol-4-yl]-benzamide;

I-98 2-dimethylamino-N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-acetamide;

I-99 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-2-methyl-benzamide;

I-100 Heptanoic acid[2-(2,6-dioxo-piperidin-3-yl)-1-oxo-2,3-dihydro-1H-isoindol-4-yl]-dihydro-1H-isoindol-4-yl]-amide;

I-101 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-3,3-dimethyl-butryamide;

I-102 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-isobutyramide;

I-103 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-3-phenyl-propionamide;

5 I-104 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-4-methoxy-benzamide

I-105 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-2-trifluoromethyl-benzamide;

10 I-106 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-malonamic acid methyl ester;

I-107 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-3-methoxy-propionamide;

15 I-108 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-2-hydroxy-acetamide

I-109 4-[(furan-2-ylmethyl)-amino]-2-(1-methyl-2,6-dioxo-piperidin-3-yl)-isoindole-1,3-dione;

20 I-110 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-ylmethyl]-isonicotinamide;

I-111 N-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-ylmethyl]-acetamide;

25 I-112 {5-[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-ylcarbamoyl]-pentyl}-carbamic acid benzyl ester;

30 I-113 2-(2,6-Dioxo(3-piperidyl))-4-({[(cyclohexylamino)thioxomethyl]amino}methyl)isoindole -1,3-dione;

I-114 2-(2,6-Dioxo(3-piperidyl))-4-({[(ethylamino)thioxomethyl]amino}methyl)isoindole -1,3-dione;

I-115 2-(2,6-Dioxo(3-piperidyl))-4-((propylamino)thioxomethyl)amino-methyl)isoindole-1,3-dione;

I-116 N-[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisindolin-4-yl]-2-chlorobenzylamine;

I-117 {5-[2-(2,6-Dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-ylcarbamoyl]-pentyl}-carbamic acid benzyl ester;

I-118 2-Methoxy-N-[2-(3-methyl-2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-acetamide;

I-119 Pentanoic acid [2-(3-methyl-2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-amide;

I-120 Heptanoic acid [2-(3-methyl-2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-amide;

I-121 3-Chloro-N-[2-(3-methyl-2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-benzamide;

I-122 N-[2-(3-Methyl-2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-propionamide;

I-123 Thiophene-2-carboxylic acid [2-(3-methyl-2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl]-amide;

I-124 2-(2,6-Dioxo-piperidin-3-yl)-4-[(5-methyl-furan-2-ylmethyl)-amino]-isoindole-1,3-dione;

I-125 2-(2,6-Dioxo-piperidin-3-yl)-4-[(5-hydroxymethyl-furan-2-ylmethyl)-amino]-isoindole-1,3-dione;

I-126 2-(2,6-Dioxo-piperidin-3-yl)-4-[(thiophen-2-ylmethyl)-amino]-isoindole-1,3-dione;

I-127 4-(3-Chloro-benzylamino)-2-(2,6-dioxo-piperidin-3-yl)-isoindole-1,3-dione;

I-128 2-(2,6-Dioxo-piperidin-3-yl)-4-[(pyridin-3-ylmethyl)-amino]-isoindole-1,3-dione;

I-129 5- {[2-(2,6-Dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-ylamino]-methyl}-furan-2-carboxylic acid;

I-130 4-[(4,5-Dimethyl-furan-2-ylmethyl)-amino]-2-(2,6-dioxo-piperidin-3-yl)-isoindole-1,3-dione ;

I-131 4-[(Benzofuran-2-ylmethyl)-amino]-2-(2,6-dioxo-piperidin-3-yl)-isoindole-1,3-dione ;

I-132 4-(3-Chloro-benzylamino)-2-(3-methyl-2,6-dioxo-piperidin-3-yl)-isoindole-1,3-dione;

I-133 3-[4-(3-Chloro-benzylamino)-1-oxo-1,3-dihydro-isoindol-2-yl]-piperidine-2,6-dione;

I-134 N- {[2-(2,6-Dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl]methyl}(cyclopentylamino)carboxamide;

I-135 N- {[2-(2,6-Dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl]methyl}(3-pyridylamino)carboxamide Hydrochloride;

I-136 N- {[2,(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl]methyl}piperidylcarboxamide;

I-137 Tert-Butyl 4-(N- {[2-(2,6-dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl]methyl}(carbamoyl)piperazinecarboxylate;

I-138 N- {[2-(2,6-Dioxo(3-piperidyl))-1,3-dioxoisoindolin-4-yl]methyl}(diethylamino)carboxamide;

I-139 Cyclopropyl-N-{[2-(3-methyl-2,6-dioxo(3-piperidyl))-1,3-dioxoisindolin-4-yl]methyl}carboxamide;

I-140 N-{[2-(2,6-Dioxo(3-piperidyl))-1-oxoisindolin-4-yl]methyl}cyclopropylcarboxamide;

I-141 N-{[2-(2,6-Dioxo(3-piperidyl))-1-oxoisindolin-4-yl]methyl}(ethylamino)carboxamide; or

I-142 Piperazine-1-carboxylic acid
[2-(2,6-dioxo-piperidin-3-yl)-1,3-dioxo-2,3-dihydro-1H-isoindol-4-ylmethyl]-amide

or a pharmaceutically acceptable salt, hydrate, solvate, clathrate, enantiomer, diastereomer, racemate, or mixture of stereoisomers thereof.

41. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 1 and a pharmaceutically acceptable vehicle or carrier.

20 42. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 10 and a pharmaceutically acceptable vehicle or carrier.

43. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 14 and a pharmaceutically acceptable vehicle or carrier.

25 44. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 18 and a pharmaceutically acceptable vehicle or carrier.

45. A pharmaceutical composition comprising a therapeutically effective amount 30 of a compound of claim 22 and a pharmaceutically acceptable vehicle or carrier.

46. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 28 and a pharmaceutically acceptable vehicle or carrier.

35 47. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 34 and a pharmaceutically acceptable vehicle or carrier.

48. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 40 and a pharmaceutically acceptable vehicle or carrier.

49. A method of modulating the production of TNF- α in a mammal comprising 5 administering to said mammal an effective amount of a compound of claim 1.

50. A method of modulating the production of IL-1 β in a mammal comprising administering to said mammal an effective amount of a compound of claim 1.

10 51. A method of modulating the production of IL-10 in a mammal comprising administering to said mammal an effective amount of a compound of claim 1.

52. A method of modulating the production of T-cells in a mammal comprising administering to said mammal an effective amount of a compound of claim 1.

15 53. A method of treating cancer in a mammal, comprising administering to a mammal in need thereof a therapeutically effective amount of a compound of claim 1, 10, 14, 18, 22, 28, 34, or 40.

20 54. The method of claim 53, wherein the cancer is a solid tumor or a blood born tumor.

25 55. The method of claim 53, wherein the cancer is cancer of the skin, blood, lymph node, breast, cervix, uterus, gastrointestinal tract, lung, ovary, prostate, mouth, brain, head, neck, throat, colon, rectum, testes, kidney, pancreas, bone, spleen, liver, bladder, larynx, or nasal passages.

56. The method of claim 53, wherein the cancer is melanoma, multiple myeloma, or a leukemia.

30 57. A method of treating cancer in a mammal, comprising administering to a mammal in need thereof a therapeutically effective amount of a compound of claim 1 and another chemotherapeutic agent.

58. The method of claim 57, wherein the other cancer chemotherapeutic agent is paclitaxel, cisplatin, tamoxifen, docetaxel, epirubicin, doxorubicin, irinotecan, leuprolide, bicalutamide, goserelin implant, gemcitabine, or sargramostim.

5 59. The method of claim 57, wherein the other cancer chemotherapeutic agent is an anti-cancer vaccine.

60. A method of treating an inflammatory disorder in a mammal, comprising 10 administering to a mammal in need thereof a therapeutically effective amount of a compound of claim 1.

61. The method of claim 60, wherein the inflammatory disorder is arthritis, rheumatoid spondylitis, psoriasis, inflammatory bowel disease, post ischemic perfusion injury, or chronic inflammatory pulmonary disease.

15 62. The method of claim 61, wherein the arthritis is rheumatoid arthritis or osteoarthritis.

63. A method of treating heart disease in a mammal comprising administering to 20 a mammal in need thereof a therapeutically effective amount of a compound of claim 1.

64. A method of modulating the production of TNF- α in a mammalian cell or tissue comprising contacting an effective amount of a compound of claim 1.

25 65. A method of modulating the production of IL-1 β in a mammalian cell or tissue comprising contacting an effective amount of a compound of claim 1.

66. A method of modulating the production of IL-10 in a mammalian cell or tissue comprising contacting an effective amount of a compound of claim 1.

30 67. A method of modulating the production of T-cells in a mammalian cell or tissue comprising contacting an effective amount of a compound of claim 1.